IN THE SPECIFICATION

1. Please replace the paragraph beginning on page 14, line 4 with the following replacement paragraph:

FIG. 4 illustrates a logic apparatus block diagram that may be used to implement the previously discussed algorithm. This apparatus may be employed within the log-likelihood ratio calculator 202 as illustrated in FIG. 2. In particular the demodulated symbol being formatted in the ~~twos~~ two's complement form of *si.f* is input to the logic apparatus where the individual components are split into the sign s, the integer and fractional portions *i.f*, the integer portion *i* alone and the fractional portion *f* alone. Prior to splitting the ~~twos~~ two's complemented symbol into its components, an absolute value block 402 is used to remove the sign portion S of the ~~twos~~ two's complemented symbol. Each of the values is input to a combinatorial logic 404, which, in turn, calculates numerous flags dependent on the values input. For example, the logic 404 outputs a flag when the value ~~of I~~ of *i* is greater than zero, an even or odd indication when the integer value is respectively even or odd or when the absolute value ~~of I~~ of *i* lies between, above or below particular numerical values. These flags are used by the logic to decide which of various inputs will be output, as will be discussed later and are essentially indicative of the position ~~of I~~ of *i* relative to various values along the I axis.

2. Please replace the paragraph beginning on page 9, line 28 with the following replacement paragraph:

Where I_1 is the ~~twos~~ two's complement formatted position of the first bit I_1. In this case the minimum distance between the demodulated symbol bit I_1 and a constellation point having a bit I_1 with the value of zero can be determined using the following relationships rather than calculating squared Euclidean distances for all 32 symbols where the most significant bit will be equal to zero

3. Please replace the paragraph beginning on page 10, line 10 with the following replacement paragraph:

Secondly, if the value of I is greater than zero the minimum distance to a constellation point having a bit I_1 equal to zero can be easily obtained dependent on whether the integer portion of the demodulated symbol value I is even or odd. If the integer portion is odd, then the minimum value is simply equal to the fractional portion of the ~~twos~~ two's complement formatted demodulated symbol. For example, if the demodulated symbol location is at 3.9 in the I direction of the Cartesian plane then the closest constellation points will be those in the second column at a value of 3. Thus, the distance along the I axis between the demodulated symbol and the constellation point is .9, which is the fractional part f of I. Alternatively, if the integer portion i of the demodulated ~~twos~~ two's complemented symbol is even then the minimum value is equal to $1-f$. For example, if the demodulated symbol lies at 4.1 in the I direction, the closest constellation points will lie in the third column at 5 along the I axis of the Cartesian plane. Thus, the distance is 1 minus the fractional portion f (i.e., .1) or, in other words, .9.